Figure 2: RGB-D image to point cloud

Conflicts

None declared.

Ethical Declaration

This article does not contain any studies involving human participants and/or animals performed by any of the authors.

REFERENCES

[1] Kutlu Y, Alanoglu Z, Gokcen A, Yeniad M. Raspberry Pi based intelligent robot that recognizes and places puzzle objects. Journal of Intelligent Systems with Applications 2019; 2(1): 85-89.

[2] Yasar A, Uslu E, Cakmak F, Altuntas N, Amasyali MF, Yavuz S. Autonomous mobile robot navigation in structured rough terrain. Journal of Intelligent Systems with Applications 2018; 1(1): 67-74

[3] Uslu T, Cetin L, Gezgin E. Preliminary study of a surgical navigation with point based registration method. Journal of Intelligent Systems with Applications 2021; 4(1): 6-9.

[4] Kato H, Beker D, Morariu M, Ando T, Matsuoka T, Kehl W, Gaidon A. Differentiable rendering: A survey. arXiv preprint 2020; arXiv:2006.12057.

[5] Zhang J, Ramanagopal MS, VasudevanR, Johnson-Roberson M. Listereo: Generate dense depth maps from lidar and stereo imagery. In IEEE International Conference on Robotics and Automation (ICRA), May 31-August 31, 2020, Paris, France , pp. 7829-7836.

[6] Imran S, Long Y, Liu X, Morris D. Depth coefficients for depth completion. In IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), June 15-20, 2019, Long Beach, CA, USA, pp. 12438-12447.

[7] Zhang Y, Funkhouser T. Deep depth completion of a single RGB-D image. In IEEE/CVF Conference on Computer Vision and Pattern Recognition, June 18-23, 2018, Salt Lake City, UT, USA, pp. 175-185.

[8] Shinohara T, Xiu H, Matsuoka M. Point2color: 3D point cloud colorization using a conditional generative network and differentiable rendering for airborne LiDAR. In IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), June 19-25, 2021, Nashville, TN, USA, pp. 1062-1071.

[9] Zhou QY, Park J, Koltun V. Open3D: A modern library for 3D data processing. arXiv preprint 2018; arXiv:1801.09847.

[10] Luo S, Hu W. (2021). Diffusion probabilistic models for 3D point cloud generation. In IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), June 20-25, 2021, Nashville, TN, USA, pp. 2837-2845,

[11] Mildenhall B, Srinivasan PP, Tancik M, Barron JT, Ramamoorthi R, Ng R. Nerf: Representing scenes as neural radiance fields for view synthesis. In 16th European conference on computer vision, August 23-28, 2020, pp. 405-421.

[12] Wiles O, Gkioxari G, Szeliski R, Johnson J. Synsin: End-to-end view synthesis from a single image. In IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), June 13-19, 2020, Seattle, WA, USA, pp. 7467-7477.

[13] Ravi N, Reizenstein J, Novotny D, Gordon T, Lo WY, Johnson J, Gkioxari G. Accelerating 3D deep learning with pyTorch3D. arXiv preprint 2020; arXiv:2007.08501.